

--CROSS-REFERENCE TO RELATED APPLICATIONS

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This application is a continuation of application Serial No. 09/731,591, filed December 7, 2000, now U.S. Patent No. 6,376,489, which claims the benefit of provisional application Serial No. 60/171,023, filed December 23, 1999.--

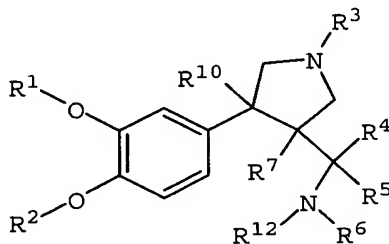
IN THE CLAIMS:

Cancel claims 1-45.

Add new claims 46-51:

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--46. A method of inhibiting IL-1 β release by monocytes in a mammal comprising administering to said mammal a therapeutically effective amount of a compound having a formula:



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wherein R¹ is lower alkyl, bridged alkyl, aryl, heteroaryl, aralkyl, cycloalkyl, a 5- or 6-membered saturated heterocycle, C₁₋₄alkylenearyl, C₁₋₄alkyleneOaryl, C₁₋₄alkyleneheteroaryl, C₁₋₄alkyleneHet, C₂₋₄alkylenearylo-aryl, C₁₋₄alkylene bridged alkyl, C₁₋₃alkylenecycloalkyl, substituted or unsubstituted propargyl, substituted or unsubstituted allyl, or halocycloalkyl;

R^2 is hydrogen, methyl, or halo-substituted methyl;

R^3 is selected from the group consisting of $C(=O)OR^7$, $C(=O)R^7$, $C(=NH)NR^8R^9$, $C(=O)NR^8R^9$, lower alkyl, bridged alkyl, cycloalkyl, haloalkyl, halocycloalkyl, C_{1-3} alkylenecycloalkyl, a 5- or 6-membered saturated heterocycle, aryl, heteroaryl, C_{1-3} alkylene $C(=O)R^7$, $C(=O)-C(=O)NR^8R^9$, C_{1-4} alkylene OR^7 , C_{1-3} alkylenearyl, SO_2 heteroaryl, Het, aralkyl, alkaryl, heteroaralkyl, heteroalkaryl, C_{1-3} alkylene $C(=O)OR^7$, $C(=O)C_{1-3}$ alkylene $C(=O)OR^7$, C_{1-3} alkyleneheteroaryl, $C(=O)C(=O)OR^7$, $C(=O)C_{1-3}$ alkylene $C(=O)OR^7$, $C(=O)C_{1-3}$ alkylene $NH(C(=O)OR^7)$, $C(=O)C_{1-3}$ alkylene NH_2 , and $NHC(=O)OR^7$;

R^4 is hydrogen, lower alkyl, haloalkyl, cycloalkyl, or aryl;

R^5 is hydrogen, lower alkyl, alkynyl, haloalkyl, cycloalkyl, or aryl;

R^6 and R^{12} , independently, are hydrogen, lower alkyl, aralkyl, SO_2R^{11} , or $C(=O)R^7$;

R^7 is selected from the group consisting of branched or unbranched lower alkyl, heteroaryl, a heterocycle, aralkyl, and aryl, and R^7 can be optionally substituted with one or more of RO^8 , NR^8R^9 , or SR^8 ;

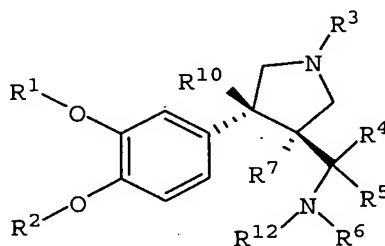
R^8 and R^9 , same or different, are selected from the group consisting of hydrogen, lower alkyl, cycloalkyl, aryl, heteroaryl, alkaryl, heteroaralkyl, heteroalkaryl, and aralkyl, or R^8 and R^9 can be taken together form a 4-membered to 7-membered ring;

R^{10} is hydrogen, alkyl, haloalkyl, cycloalkyl, aryl, $C(=O)$ alkyl, $C(=O)$ cycloalkyl, $C(=O)$ aryl, $C(=O)$ -Oalkyl, $C(=O)O$ cycloalkyl, $C(=O)$ aryl, CH_2OH , CH_2O alkyl, CHO , CN , NO_2 , or SO_2R^{11} ;

R^{11} is alkyl, cycloalkyl, trifluoromethyl, aryl, aralkyl, or NR^8R^9 ;

salts and solvates thereof.

47. The method of claim 46 wherein the compound has the structure:



48. The method of claim 46 wherein the compound is selected from the group consisting of

Methyl (4S,3R)-4-(3-cyclopentyloxy-4-methoxyphenyl)-3-methyl-3-{[benzylamino]methyl}pyrrolidine carboxylate

Methyl (4S,3R)-3-(aminomethyl)-4-(3-cyclopentyloxy-4-methoxyphenyl)-3-methylpyrrolidinecarboxylate

Methyl (3S,4S)-4-(3-cyclopentyloxy-4-methoxyphenyl)-3-methyl-3-{[methylsulfonyl)amino]methoxy}pyrrolidinecarboxylate

Methyl (4S,3R)-3-[(acetylamino)methyl]-4-(3-cyclopentyloxy-4-methoxyphenyl)-3-methylpyrrolidinecarboxylate

Methyl (4S,3R)-4-(3-cyclopentyloxy-4-methoxyphenyl)-3-methyl-3-[(phenylcarbonylamino)methyl]pyrrolidinecarboxylate

Methyl (3S,4S)-4-(3-cyclopentyloxy-4-methoxyphenyl)-3-methyl-3-{[phenylsulfonyl]amino}methyl}pyrrolidinecarboxylate

Bis{[(4S,3R)-4-(3-cyclopentyloxy-4-methoxyphenyl)-3-methyl-1-carboxymethylpyrrolidin-3-yl]methyl}amine

1-[(3S,4S)-4-(3-Cyclopentyloxy-4-methoxyphenyl)-3-methyl-1-benzylpyrrolidin-3-yl]ethylamine

1-{(3S,4S)-4-(3-Cyclopentyloxy-4-methoxyphenyl)-3-methyl-1-benzylpyrrolidin-3-yl}ethylamine

N-{1-[(3S,4S)-4-(3-Cyclopentyloxy-4-methoxyphenyl)-3-methyl-1-benzylpyrrolidin-3-yl]ethyl}benzamide

N-{1-[(3S,4S)-4-(3-Cyclopentyloxy-4-methoxyphenyl)-3-methyl-1-benzylpyrrolidin-3-yl]ethyl}benzamide

N-{1-[(3S,4S)-4-(3-Cyclopentyloxy-4-methoxyphenyl)-3-methyl-1-benzylpyrrolidin-3-yl]ethyl}acetamide

N-{1-[(3S,4S)-4-(3-Cyclopentyloxy-4-methoxyphenyl)-3-methyl-1-benzylpyrrolidin-3-yl]ethyl}acetamide

3-(S)-(1-Acetylaminoethyl)-4-(S)-(3-cyclopentyloxy-4-methoxyphenyl)-3-methylpyrrolidine-1-carboxylic acid methyl ester

{1-[(3S,4S)-4-(3-Cyclopentyloxy-4-methoxyphenyl)-3-methyl-1-benzylpyrrolidin-3-yl]ethyl}(phenylsulfonyl)-amine

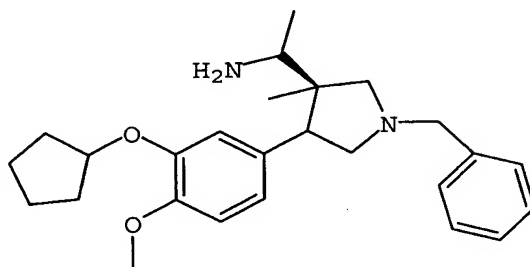
{1-[(3S,4S)-4-(3-cyclopentyloxy-4-methoxyphenyl)-3-methyl-1-benzylpyrrolidin-3-yl]ethyl}(phenylsufonyl)amine

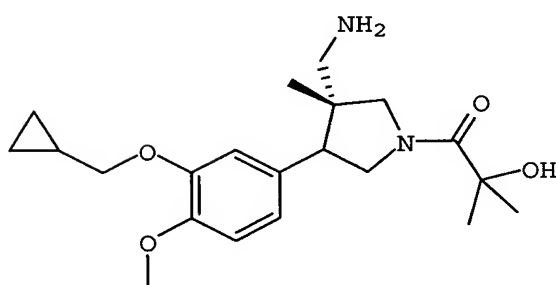
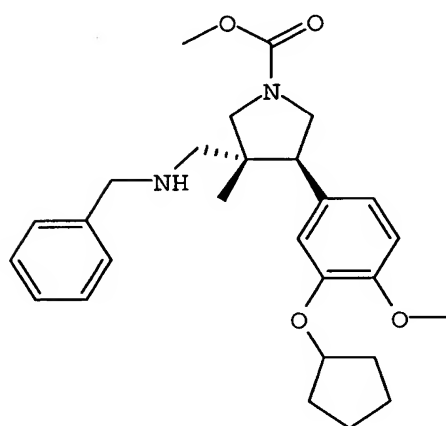
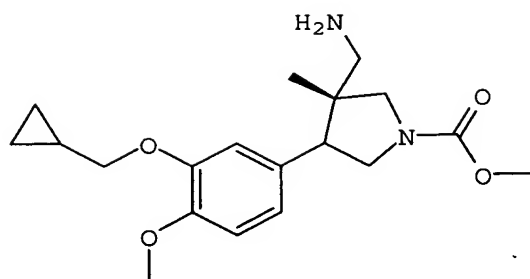
{1-[(3S,4S)-4-(3-Cyclopentyloxy-4-methoxyphenyl)-3-methyl-1-benzylpyrrolidin-3-yl]ethyl}(methylsulfonyl)-amine

{1-[(3S,4S)-4-(3-Cyclopentyloxy-4-methoxyphenyl)-3-methyl-1-benzylpyrrolidin-3-yl]ethyl}(methylsulfonyl)-amine, and

Methyl (3S,4S)-4-(3-cyclopentyloxy-4-methoxyphenyl)-3-methyl-3-[(methylamino)ethylpyrrolidine carboxylate.

49. The method of claim 46 wherein the compound is the group consisting of:

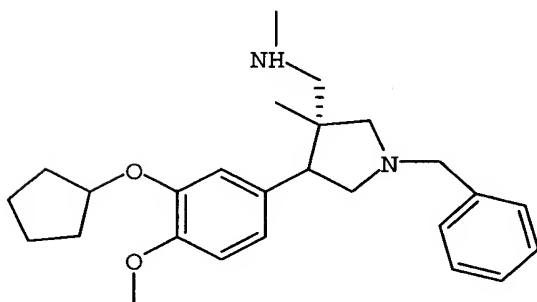
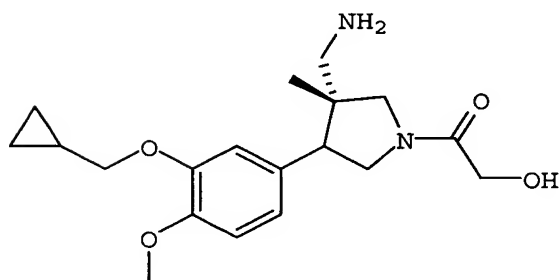
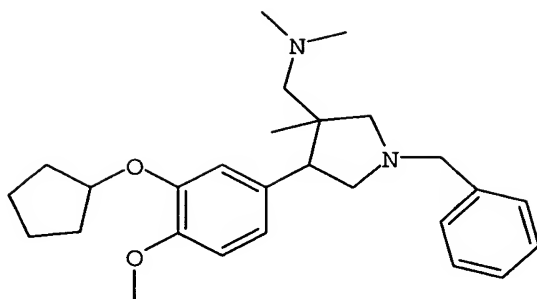


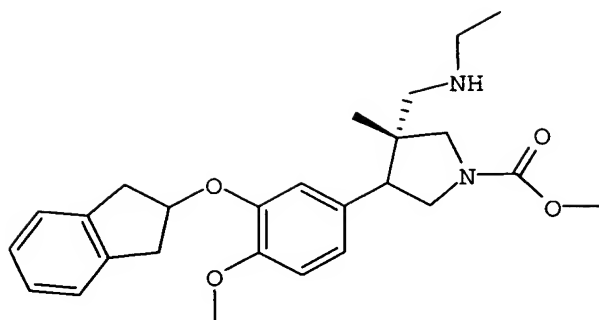


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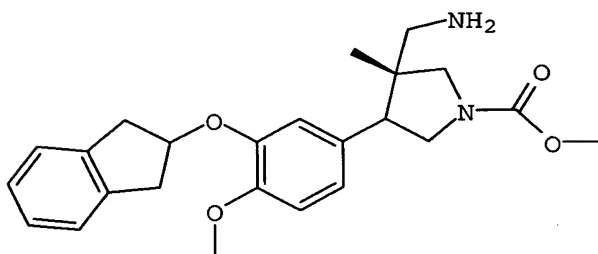
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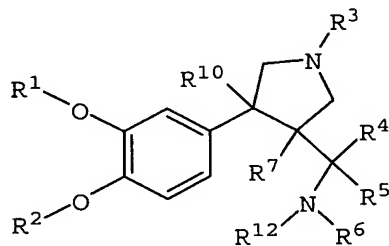


and



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50. A method of inhibiting activation of human T-lymphocytes in a mammal comprising administering to said mammal a therapeutically effective amount of a compound having a formula:



wherein R¹ is lower alkyl, bridged alkyl, aryl, heteroaryl, aralkyl, cycloalkyl, a 5- or 6-membered saturated heterocycle, C₁₋₄alkylenearyl, C₁₋₄alkyleneOaryl, C₁₋₄alkyleneheteroaryl, C₁₋₄alkyleneHet, C₂₋₄alkylenearyl-Oaryl, C₁₋₄alkylene bridged alkyl, C₁₋₃alkylenecycloalkyl, substituted or unsubstituted propargyl, substituted or unsubstituted allyl, or halocycloalkyl;

R² is hydrogen, methyl, or halo-substituted methyl;

R³ is selected from the group consisting of C(=O)OR⁷, C(=O)R⁷, C(=NH)NR⁸R⁹, C(=O)NR⁸R⁹, lower alkyl, bridged alkyl, cycloalkyl, haloalkyl, halocycloalkyl, C₁₋₃alkylenecycloalkyl, a 5- or 6-membered saturated heterocycle, aryl, heteroaryl, C₁₋₃alkyleneC(=O)R⁷, C(=O)-C(=O)NR⁸R⁹, C₁₋₄alkyleneOR⁷, C₁₋₃alkylenearyl, SO₂heteroaryl, Het, aralkyl, alkaryl, heteroaralkyl, heteroalkaryl, C₁₋₃alkyleneC(=O)OR⁷, C(=O)C₁₋₃alkyleneC(=O)OR⁷, C₁₋₃alkyleneheteroaryl, C(=O)C(=O)OR⁷, C(=O)C₁₋₃alkyleneC(=O)OR⁷, C(=O)C₁₋₃alkyleneNH(C=O)OR⁷, C(=O)C₁₋₃alkyleneNH₂, and NHC(=O)OR⁷;

R⁴ is hydrogen, lower alkyl, haloalkyl, cycloalkyl, or aryl;

R⁵ is hydrogen, lower alkyl, alkynyl, haloalkyl, cycloalkyl, or aryl;

R⁶ and R¹², independently, are hydrogen, lower alkyl, aralkyl, SO₂R¹¹, or C(=O)R⁷;

R⁷ is selected from the group consisting of branched or unbranched lower alkyl, heteroaryl, a heterocycle, aralkyl, and aryl, and R⁷ can be optionally substituted with one or more of RO⁸, NR⁸R⁹, or SR⁸;

R⁸ and R⁹, same or different, are selected from the group consisting of hydrogen, lower alkyl, cycloalkyl, aryl, heteroaryl, alkaryl, heteroaralkyl, hetero-

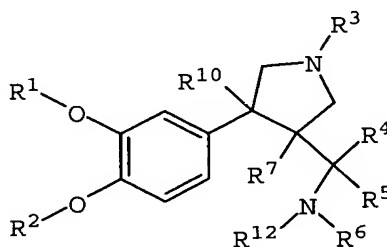
alkaryl, and aralkyl, or R⁸ and R⁹ can be taken together form a 4-membered to 7-membered ring;

R¹⁰ is hydrogen, alkyl, haloalkyl, cycloalkyl, aryl, C(=O)alkyl, C(=O)cycloalkyl, C(=O)aryl, C(=O)Oalkyl, C(=O)Ocycloalkyl, C(=O)aryl, CH₂OH, CH₂Oalkyl, CHO, CN, NO₂, or SO₂R¹¹;

R¹¹ is alkyl, cycloalkyl, trifluoromethyl, aryl, aralkyl, or NR⁸R⁹;

salts and solvates thereof.

51. A pharmaceutical composition comprising
(a) a compound having a formula



wherein R¹ is lower alkyl, bridged alkyl, aryl, heteroaryl, aralkyl, cycloalkyl, a 5- or 6-membered saturated heterocycle, C₁₋₄alkylenearyl, C₁₋₄alkyleneOaryl, C₁₋₄alkyleneheteroaryl, C₁₋₄alkyleneHet, C₂₋₄alkylenearylOaryl, C₁₋₄alkylene bridged alkyl, C₁₋₃alkylenecycloalkyl, substituted or unsubstituted propargyl, substituted or unsubstituted allyl, or halocycloalkyl;

R² is hydrogen, methyl, or halo-substituted methyl;

R³ is selected from the group consisting of C(=O)OR⁷, C(=O)R⁷, C(=NH)NR⁸R⁹, C(=O)NR⁸R⁹, lower alkyl, bridged alkyl, cycloalkyl, haloalkyl, halocycloalkyl,

C₁₋₃alkylenecycloalkyl, a 5- or 6-membered saturated heterocycle, aryl, heteroaryl, C₁₋₃alkyleneC(=O)R⁷, C(=O)-C(=O)NR⁸R⁹, C₁₋₄alkyleneOR⁷, C₁₋₃alkylenearyl, SO₂heteroaryl, Het, aralkyl, alkaryl, heteroaralkyl, heteroalkaryl, C₁₋₃alkyleneC(=O)OR⁷, C(=O)C₁₋₃alkyleneC(=O)OR⁷, C₁₋₃alkyleneheteroaryl, C(=O)C(=O)OR⁷, C(=O)C₁₋₃alkyleneC(=O)OR⁷, C(=O)C₁₋₃alkyleneNH(C=O)OR⁷, C(=O)C₁₋₃alkyleneNH₂, and NHC(=O)OR⁷;

R⁴ is hydrogen, lower alkyl, haloalkyl, cycloalkyl, or aryl;

R⁵ is hydrogen, lower alkyl, alkynyl, haloalkyl, cycloalkyl, or aryl;

R⁶ and R¹², independently, are hydrogen, lower alkyl, aralkyl, SO₂R¹¹, or C(=O)R⁷;

R⁷ is selected from the group consisting of branched or unbranched lower alkyl, heteroaryl, a heterocycle, aralkyl, and aryl, and R⁷ can be optionally substituted with one or more of RO⁸, NR⁸R⁹, or SR⁸;

R⁸ and R⁹, same or different, are selected from the group consisting of hydrogen, lower alkyl, cycloalkyl, aryl, heteroaryl, alkaryl, heteroaralkyl, heteroalkaryl, and aralkyl, or R⁸ and R⁹ can be taken together form a 4-membered to 7-membered ring;

R¹⁰ is hydrogen, alkyl, haloalkyl, cycloalkyl, aryl, C(=O)alkyl, C(=O)cycloalkyl, C(=O)aryl, C(=O)Oalkyl, C(=O)Ocycloalkyl, C(=O)aryl, CH₂OH, CH₂Oalkyl, CHO, CN, NO₂, or SO₂R¹¹;

R¹¹ is alkyl, cycloalkyl, trifluoromethyl, aryl, aralkyl, or NR⁸R⁹,

and salts and solvates thereof;

(b) a pharmaceutically acceptable carrier; and

(c) a second therapeutic agent having utility in the treatment of rheumatoid arthritis.--